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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,531	12/19/2005	Brian Graham	13801US	9102
24116 7590 09/06/2007 BATTELLE MEMORIAL INSTITUTE 505 KING AVENUE COLUMBUS, OH 43201-2693			EXAMINER KELLY, ROBERT M	
			ART UNIT 1633	PAPER NUMBER
			MAIL DATE 09/06/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/531,531

**Applicant(s)**

GRAHAM ET AL.

**Examiner**

Robert M. Kelly

**Art Unit**

1633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33,36-47 and 49-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33,36-47 and 49-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/15/05
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

Claims 1-33, 36-47, and 49-56 are presently pending.

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites "creating by a human". Such is so broad that it is not defined for its metes and bounds. For example, is the substance created by a human's excretion, or is it a manual method of dispensing? The Artisan would not know what creative steps are required to create the substance, such that it would infringe on the claim.

Claim 14 is rejected for reciting "distributing ... upon a targeted area ... in accordance with the charge on the material". It is unclear how the charge accords a specific distribution.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-3, 5-9, 12-32, 37-47, and 49-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews.

Coffee '517 teaches single-nozzle EHD delivery devices for delivery of substances by spray into the respiratory tract (e.g., ABSTRACT) and further, to avoid the lower respiratory tract of humans, particles should be 10 microns or above, and Coffee '877 teaches dual-nozzle devices for similar delivery of substances (e.g., ABSTRACT).

Maget '194 teaches a liquid spray dispenser for dispensing, *inter alia*, insecticides and therapeutics transdermally to horses (e.g., ABSTRACT, EXAMPLE 3).

Matthews '504 teaches an animal spraying apparatus, which applies liquids to the surface of the animal as it moves back and forth through the passageway (e.g., ABSTRACT).

Hence, at the time of invention, it would have been obvious to apply the Matthews '504 apparatus, in combination with the EHD delivery device(s) of Coffee, and do so to horses, as further taught in Matthews. Because the references teach similar methods of spraying animals to obtain various therapeutic and cosmetic alterations, it would have been obvious to the Artisan to utilize any combination of these elements to provide the predictable result of distributing one or more therapeutics and/or cosmetics to the animal without allowing the particles to enter the lower respiratory tract of humans.

With regard to the distribution and standard deviation requirements of Claim 8, because the mechanics of fluid flow, nozzle size, and the relation to droplet size are understood and controllable to the artisan (this is official notice), absent reason to believe otherwise, the Artisan would necessarily obtain such distributions, in order to deliver more uniform products.

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With regard to the curved trajectories, the fluids are influenced by gravity, and hence achieve the same planar distribution along the curved surfaces of the animal. Still further, the wraparound effect is necessarily present (e.g., Applicant's FIGURE 2b).

With regard to avoiding dermatitis, etc., the Artisan would necessarily do so in order to avoid negatively affecting the animal.

With regard to alternating the discharges, and opposite charges, the Artisan would simply find such to be design choice, and alternating the charges would be obvious as it allows the dispersed substances to attract each other on the surface of the animal.

With regard to the acoustic emission, the discharge of liquid necessarily would cause sound to be generated.

With regard to using a handheld device, the Artisan would also find such obvious, as it has been done at small farms for many years. E.g., horse owners have for many years applied sprays to control insects, mites, fungi, and other pests from growth on their horses, and they have no need for a large device, such as that of Matthews, and still further Applicant's own application admits that such applications are known in the prior art (e.g., FIGURE 1).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1633

Claims 1-3, 5-33, 37-47, and 49-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews as applied to claims 1-3, 5-9, 12-32, 37-47, and 49-56 above, and further in view of U.S. Patent Nos. 6,029,610 to Ramsey, 6,130,253 to Franklin, et al., and 6,201,017 to Sembo.

As shown above, the Coffee, Maget and Matthews patents make obvious the various aspects of the previously-rejected claims, however, they do not make obvious the use of surfactant carriers or the use of a combination of a neonicotinoid and a pyrethroid.

On the other hand, Ramsey teaches washing animals in a similar device with shampoos which may include a surfactant (e.g., ABSTRACT; col. 3, paragraph 2).

Further, Sembo '017 teaches the use of ectoparasite controlling agents, which are neonicotinoids, for treatment of animals externally (e.g., ABSTRACT and col. 1, paragraph 5) and Franklin '253 teaches the use of pyrethroids for treatment of animals by inter alia sprays (e.g., ABSTRACT).

Hence, it would be obvious to include the shampoos of Ramsey at the same time and include the pyrethroids and neonicotinoids of Sembo and Franklin. The Artisan would have been motivated to do so in order to clean the animal. Moreover, the artisan would have expected success, as Ramsey, Sembo and Franklin teach that it can be done this way to clean the animals.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 12-22, 41-46 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews as applied to claims 1-3, 5-9, 12-32, 37-47, and 49-56 above, and further in view of U.S. Patent No. 6,302,331 to Dvorsky.

As shown above, the Coffee, Maget and Matthews patents make obvious the various aspects of the previously-rejected claims, however, they do not make obvious the use of an EHD device to deliver an uncharged particle.

On the other hand, Dvorsky teaches the use of such to deliver uncharged particles (e.g., col. 4, paragraph 3).

Hence, at the time of invention, it would have been obvious to further modify the methods to deliver an uncharged particle via EHD. The Artisan would have done so, as it is merely one of design choice. Moreover, the artisan would have had a reasonable expectation of success, as Dvorsky teaches it can be done.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

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USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

As there are many rejections under this category, the rejections will be further explained after a summary of each rejection.

Claims 1-33, 36-47, and 49-56 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 5,655,517 in view of U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews, and/or further in view of U.S. Patent Nos. 6,029,610 to Ramsey, 6,130,253 to Franklin, et al., and 6,201,017 to Sembo and or further in view of U.S. Patent No. 6,302,331 to Dvorsky.

Claims 1-33, 36-47, and 49-56 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 5,813,614 in view of U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews, and/or further in view of U.S. Patent Nos. 6,029,610 to Ramsey, 6,130,253 to Franklin, et al., and 6,201,017 to Sembo and or further in view of U.S. Patent No. 6,302,331 to Dvorsky.

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Claims 1-33, 36-47, and 49-56 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 5,915,377 in view of U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews, and/or further in view of U.S. Patent Nos. 6,029,610 to Ramsey, 6,130,253 to Franklin, et al., and 6,201,017 to Sembo and or further in view of U.S. Patent No. 6,302,331 to Dvorsky.

Claims 1-33, 36-47, and 49-56 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,105,571 in view of U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews, and/or further in view of U.S. Patent Nos. 6,029,610 to Ramsey, 6,130,253 to Franklin, et al., and 6,201,017 to Sembo and or further in view of U.S. Patent No. 6,302,331 to Dvorsky.

Claims 1-33, 36-47, and 49-56 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 24-26 of U.S. Patent No. 6,252,129 in view of U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews, and/or further in view of U.S. Patent Nos. 6,029,610 to Ramsey, 6,130,253 to Franklin, et al., and 6,201,017 to Sembo and or further in view of U.S. Patent No. 6,302,331 to Dvorsky.

Claims 1-33, 36-47, and 49-56 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,386,195 in view of U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews, and/or further in view of U.S. Patent Nos. 6,029,610 to

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Ramsey, 6,130,253 to Franklin, et al., and 6,201,017 to Sembo and or further in view of U.S.

Patent No. 6,302,331 to Dvorsky.

Claims 1-33, 36-47, and 49-56 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-52 of U.S. Patent No. 6,595,208 in view of U.S. Patent Nos. 5,655,517 to Coffee, et al., 6,105,877 to Coffee, et al., 5,928,194 to Maget, and 4,334,504 to Matthews, and/or further in view of U.S. Patent Nos. 6,029,610 to Ramsey, 6,130,253 to Franklin, et al., and 6,201,017 to Sembo and or further in view of U.S. Patent No. 6,302,331 to Dvorsky.

As shown in the art rejections, the various aspects of the invention are already obvious, however, further, the various patents each claim specific EHD devices with particular characteristics. As such, it would have been obvious to modify the Art to provide the particular characteristics of any device claimed. Such is simply the substitution of a known part with an equivalent part for the predictable outcome of applying such substances topically to animals.

### ***Conclusion***

No claim is allowed.

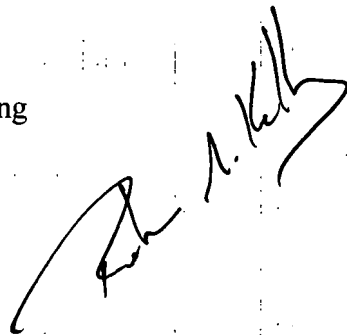
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Kelly, Art Unit 1633, whose telephone number is (571) 272-0729. The examiner can normally be reached on M-F, 9:00am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach can be reached on (571) 272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "R. M. Kelly", is written diagonally across the page.